RICE Operating Company
112 West Taylor • Hobbs, New Mexico 88240
Phone: (575) 393-9174 • Fax: (575) 397-1471

April 1, 2024

Nelson Velez
Environmental Bureau, Oil Conservation Division
New Mexico Energy, Minerals, & Natural Resources Department
1220 S. St. Francis Drive
Santa Fe, New Mexico 87505

RE: **2023 Annual Groundwater Report**
Rice Operating Company – BD SWD System
BD F-29 (1R426-16) and F-29-1 (1R426-15): UL/F, Sec. 29, T21S, R37E
NMOCD Incident ID: nAPP2109649080, nAPP2109650082

Mr. Velez:

ROC is the service provider (agent) for the BD SWD System and has no ownership of any portion of the pipeline, well, or facility. The system is owned by a consortium of oil producers, System Parties, who provide all operating capital on a percentage ownership/usage basis.

Background and Previous Work

The BD F-29 site is located 25 ft south from the BD F-29-1 site. These sites are located approximately 1.5 miles northwest of Eunice, New Mexico at UL/F, Sec. 29, T21S, R37E as shown on the Geographical Location Map. Groundwater sampling at the site indicated the depth to groundwater is approximately 99 feet below ground surface (bgs).

BD F-29 Backhoe Delineation
In 2003, ROC initiated work on the former BD F-29 junction box. The site was delineated using a backhoe to form a 25x10x14-ft deep excavation and soil samples were screened at regular intervals for both hydrocarbon and chloride. From the excavation, the four-wall composite and the bottom composite were taken to a commercial laboratory for analysis. Laboratory tests of the four-wall composite and the bottom composite resulted in elevated chloride concentrations. TPH concentrations were low and BTEX concentrations were below detectable limits. The site was backfilled, the area was contoured to the surrounding area, and an identification plate was placed on the surface of the site to mark its location for future environmental considerations. NMOCD was notified of potential groundwater impact on March 26th, 2003 and a junction box disclosure report was submitted to NMOCD with all the 2003 junction box closures and disclosures.

BD F-29-1 Backhoe Delineation
In 2003, ROC initiated work on the former BD F-29-1 junction. The site was delineated using a backhoe to form a 20x10x6-ft deep excavation and soil samples were screened at regular intervals for both hydrocarbon and chloride. From the excavation, the bottom composite was

taken to a commercial laboratory for analysis. Laboratory testing on the bottom composite showed a chloride laboratory reading of 1,060 mg/kg, a GRO reading of non-detect and a DRO reading of 26.6 mg/kg. BTEX readings returned a result of non-detect. The site was backfilled, the area was contoured to the surrounding area, and an identification plate was placed on the surface of the site to mark its location for future environmental considerations. NMOCD was notified of potential groundwater impact on March 26th, 2003 and a junction box closure report was submitted to NMOCD with all the 2003 junction box closures and disclosures.

An Investigation and Characterization Plan (ICP) was submitted to NMOCD July 2nd, 2013. According to the ICP, a total of 18 soil bores were drilled at the two sites. As the bores were advanced, soil samples were collected at regular intervals and field tested for chloride and hydrocarbon. Representative samples from each bore were sent to a commercial laboratory for analysis. The interior bores (soil bores 1-9, 11 and 14-16) located close to the former boxes, showed evidence of elevated chlorides throughout each bore. The most outer bores (soil bores 12, 13, 17 and SB-18) showed laboratory chloride readings that decrease to below 250 mg/kg before reaching the capillary fringe. GRO and DRO readings were non-detect in all bores at all depths. All borings were plugged with bentonite to ground surface.

According to a Corrective Action Plan (CAP) approved by the NMOCD on October 30th, 2013, ROC installed a 20-mil reinforced liner measuring 247x106-ft at a depth of 4.5 ft bgs. The liner extended 5 ft beyond the furthest soil bores and will provide a barrier that will inhibit the downward migration of residual chloride to the groundwater. The soils placed above the liner had a laboratory chloride reading of 240 mg/kg and 320 mg/kg, and field PID readings of 0.4 ppm and 1.2 ppm. Upon completion of backfilling, the site was seeded with a native vegetative mix and soil amendments. A CAP Report and Soil Closure Request summarizing this work was submitted to NMOCD on July 23rd, 2014, and NMOCD granted Soil Closure on September 18th, 2014.

On November 13th, 2018, a near-source monitor well (MW-1) was installed approximately 70 ft southeast of the former junction boxes. On December 10th, 2018, an up-gradient well (MW-2) was installed approximately 133 ft northwest and a down-gradient well (MW-3) was installed approximately 170 ft southeast of the former junction boxes. These wells were developed and have been sampled regularly. The most recent sampling event resulted in a chloride concentration of 480 mg/L in MW-1, 108 mg/L in MW-2, and 84 mg/L in MW-3. BTEX concentrations remained below detectable limits since the wells were installed. In 2020, ROC received NMOCD approval to cease BTEX sampling. On February 4th, 2022, and again on December 13th, 2022, NMOCD granted approval to cease sampling in the up-gradient well, MW-2. NMOCD also granted approval to cease sulfate analysis in MW-1, MW-2, and MW-3. ROC will continue to grab samples from MW-2, as needed, to ensure there are no non-ROC, up-gradient sources contributing to the degradation of groundwater quality. ROC will continue quarterly sampling in 2024.

Attached is the Appendix, which contains:

1. A Geographical Location Map.
2. A map showing well locations and groundwater gradient.

3. A table presenting all laboratory results and depth to groundwater for each well at the site, and a graph showing laboratory results.
4. The laboratory analytical results for 2023.

Rice Operating Company appreciates the opportunity to work with you on this project. Please contact me at (575) 393-9174 if you have any questions or wish to further discuss this site. Thank you for your time and consideration.

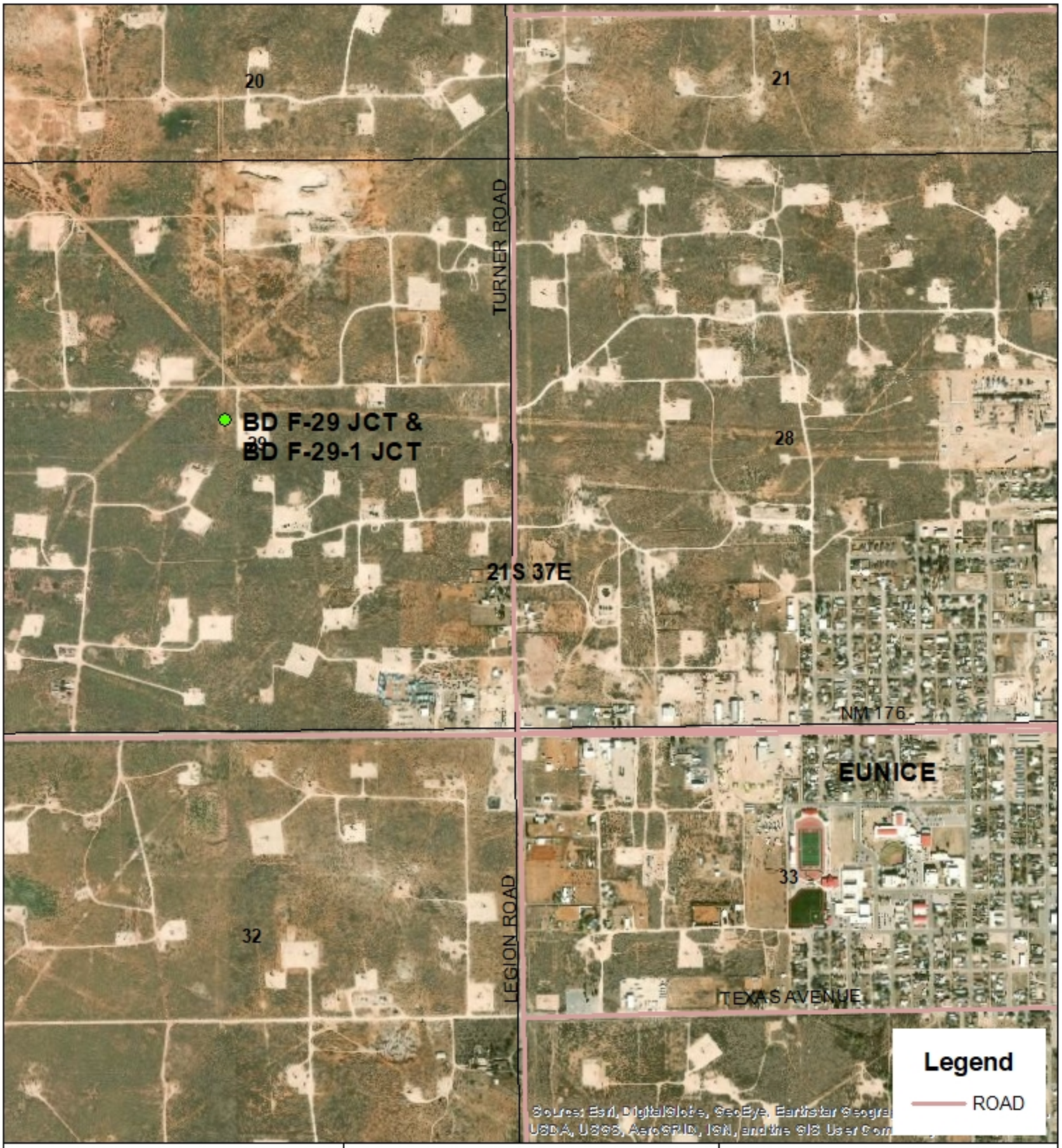
Sincerely,

Katie Davis

Katie Davis
Environmental Manager
RICE Operating Company (ROC)

appendix

Geographical Location Map



RICE OPERATING COMPANY
ROC
SINCE 1955

BD F-29 JCT
1R426-16

BD F-29-1 JCT
1R426-15

UL F SECTION 29
T-21-S R-37-E
LEA COUNTY, NM

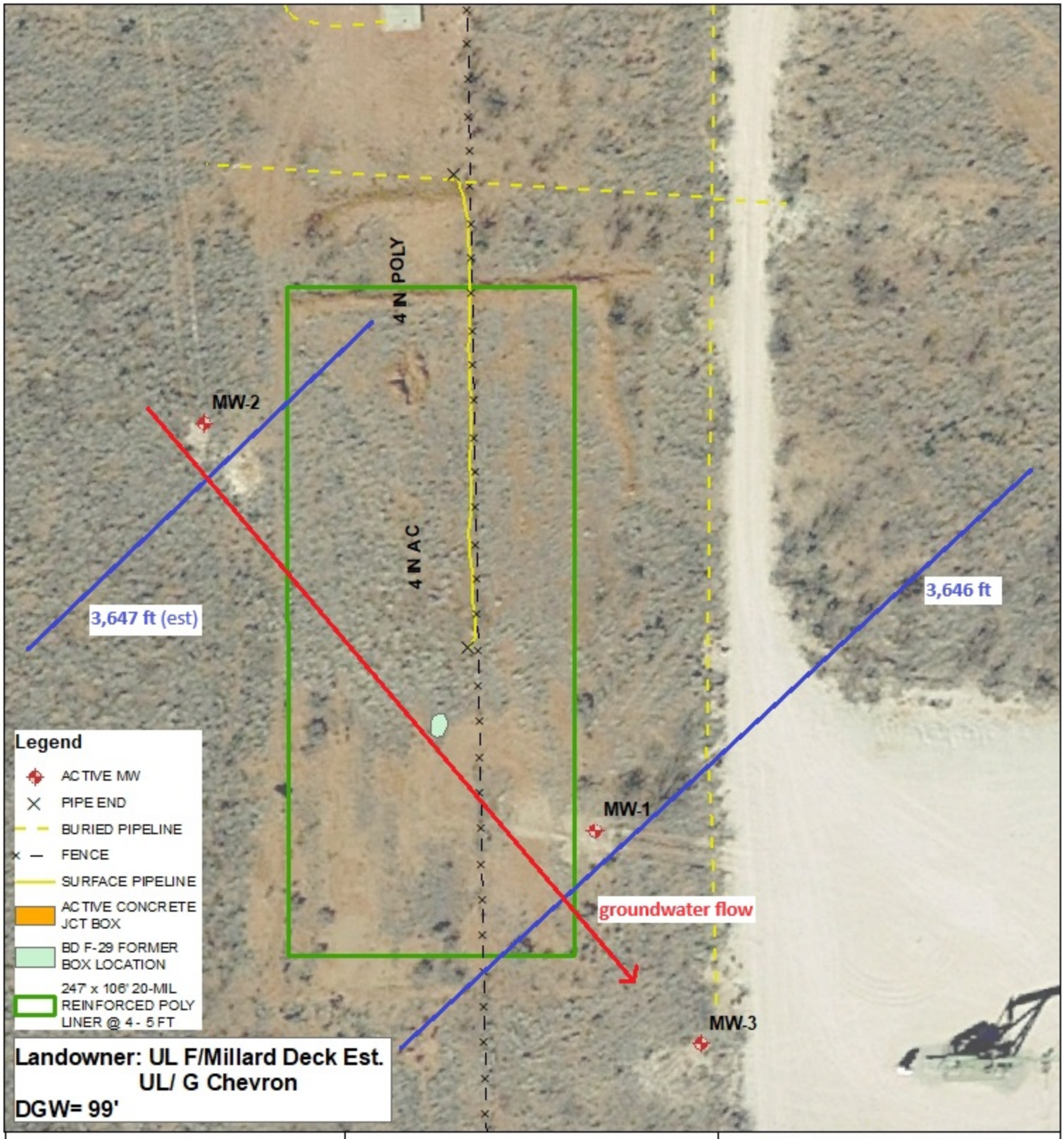
GPS:
F-29 JCT: 32.450545 -103.185153
F-29-1 JCT: 32.450619 -103.185157
NAD 83 STATE PLANE PROJ.
NM EAST ZONE

0 1,000 2,000
Feet

N
W E
S

Drawing date: 1/28/20
Drafted by: T. Grieco

Monitor Well Location



RICE OPERATING COMPANY
ROC
SINCE 1955

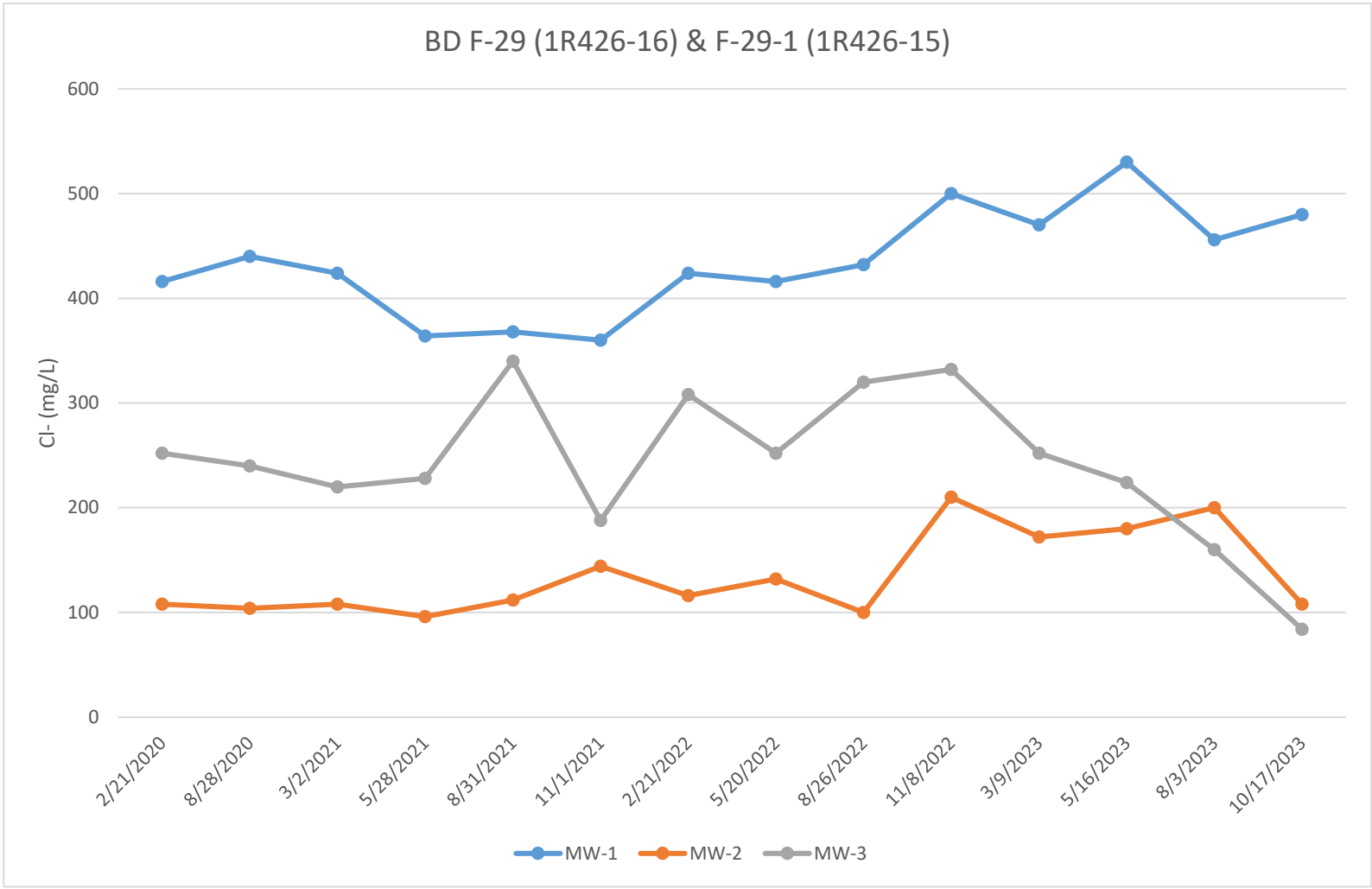
BD
F-29 & F-29-1 JCT
1R426-16 & 1R426-15
UL F & G SECTION 29
T-21-S R-37-E
LEA COUNTY, NM

GPS: 32.450619 -103.185159
NAD83 STATE PLANE PROJECTION
NEW MEXICO EAST ZONE

0 25 50
Feet

Drawing date: 6/25/19
Drafted by: T. Grieco

N
W E
S


BD F-29 (1R426-16) & F-29-1 (1R426-15)
Cl- (mg/L)
600
500
400
300
200
100
0
2/21/2020
8/28/2020
3/2/2021
5/28/2021
8/31/2021
11/1/2021
2/21/2022
5/20/2022
8/26/2022
11/8/2022
3/9/2023
5/16/2023
8/3/2023
10/17/2023
MW-1
MW-2
MW-3

ROC - BD F-29 (1R426-16) & F-29-1 (1R426-15)
Unit Letter F, Section 29, T21S, R37E

MW	Depth to Water	Total Depth	Well Volume	Volume Purged	Sample Date	Cl	TDS	Benzene	Toluene	Ethyl Benzene	Total Xylenes	Sulfate	Comments
1	99.48	116.15	10.9	35	12/26/2018	484	1,300	<0.001	<0.001	<0.001	<0.003	278	Clear No odor
1	99.45	116.15	10.9	35	2/25/2019	500	1,230	<0.001	<0.001	<0.001	<0.003	251	Clear No odor
1	99.44	116.15	10.9	35	5/6/2019	468	976	<0.001	<0.001	<0.001	<0.003	238	Clear No odor
1	99.42	116.15	10.9	35	8/20/2019	468	1,300	<0.001	<0.001	<0.001	<0.003	211	Clear No odor
1	99.44	116.15	10.9	35	11/6/2019	400	1,200	<0.001	<0.001	<0.001	<0.003	208	Clear No odor
1	99.43	116.15	10.9	35	2/21/2020	416	1,140	<0.0005	<0.0005	<0.0005	<0.002	125	Clear No odor
1	99.4	116.15	10.9	35	8/28/2020	440	1,290	XXX	XXX	XXX	XXX	218	Clear No odor
1	99.37	116.15	10.9	35	3/2/2021	424	1,250	XXX	XXX	XXX	XXX	234	Clear No odor
1	99.4	116.15	10.9	35	5/28/2021	364	1,140	XXX	XXX	XXX	XXX	216	Clear No odor
1	99.38	116.15	10.9	35	8/31/2021	368	1,200	XXX	XXX	XXX	XXX	303	Clear No odor
1	99.37	116.15	10.9	35	11/1/2021	360	1,160	XXX	XXX	XXX	XXX	301	Clear No odor
1	99.41	116.15	10.9	35	2/21/2022	424	918	XXX	XXX	XXX	XXX	294	Clear No odor
1	99.32	116.15	10.9	35	5/20/2022	416	1,230	XXX	XXX	XXX	XXX	XXX	Clear No odor
1	99.34	116.15	10.9	35	8/26/2022	432	1,230	XXX	XXX	XXX	XXX	XXX	Clear No odor
1	99.35	116.15	10.9	35	11/8/2022	500	1,340	XXX	XXX	XXX	XXX	XXX	Clear No odor
1	99.4	116.15	10.9	35	3/9/2023	470	1,290	XXX	XXX	XXX	XXX	XXX	Clear No odor
1	99.35	116.15	10.9	35	5/16/2023	530	1,380	XXX	XXX	XXX	XXX	XXX	Clear No odor
1	99.35	116.15	10.9	35	8/3/2023	456	1,240	XXX	XXX	XXX	XXX	XXX	Clear No odor
1	99.39	116.15	10.9	35	10/17/2023	480	1,350	XXX	XXX	XXX	XXX	XXX	Clear No odor

MW	Depth to Water	Total Depth	Well Volume	Volume Purged	Sample Date	Cl	TDS	Benzene	Toluene	Ethyl Benzene	Total Xylenes	Sulfate	Comments
2	98.22	102.98	0.7	3	12/26/2018	120	550	<0.001	<0.001	<0.001	<0.003	153	Clear No odor
2	98.2	102.98	0.7	3	2/25/2019	128	470	<0.001	<0.001	<0.001	<0.003	134	Clear No odor
2	98.18	102.98	0.7	3	5/6/2019	116	616	<0.001	<0.001	<0.001	<0.003	116	Clear No odor
2	98.13	102.98	0.7	3	8/20/2019	120	570	<0.001	<0.001	<0.001	<0.003	119	Clear No odor
2	98.19	102.98	0.7	3	11/6/2019	116	596	<0.001	<0.001	<0.001	<0.003	121	Clear No odor

ROC - BD F-29 (1R426-16) & F-29-1 (1R426-15)
Unit Letter F, Section 29, T21S, R37E

MW	Depth to Water	Total Depth	Well Volume	Volume Purged	Sample Date	Cl	TDS	Benzene	Toluene	Ethyl Benzene	Total Xylenes	Sulfate	Comments
2	98.16	102.48	0.7	3	2/21/2020	108	538	<0.0005	<0.0005	<0.0005	<0.002	146	Clear No odor
2	98.14	102.48	0.7	3	8/28/2020	104	617	XXX	XXX	XXX	XXX	109	Clear No odor
2	98.11	102.98	0.7	3	3/2/2021	108	598	XXX	XXX	XXX	XXX	109	Clear No odor
2	98.11	102.98	0.7	3	5/28/2021	96	607	XXX	XXX	XXX	XXX	120	Clear No odor
2	98.1	102.98	0.7	3	8/31/2021	112	620	XXX	XXX	XXX	XXX	167	Clear No odor
2	98.11	102.98	0.7	3	11/1/2021	144	674	XXX	XXX	XXX	XXX	145	Clear No odor
2	98.15	102.98	0.7	3	2/21/2022	116	520	XXX	XXX	XXX	XXX	143	Clear No odor
2	98.08	102.98	0.7	3	5/20/2022	132	634	XXX	XXX	XXX	XXX	XXX	Clear No odor
2	98.1	102.98	0.7	3	8/26/2022	100	585	XXX	XXX	XXX	XXX	XXX	Clear No odor
2	98.12	102.98	0.7	3	11/8/2022	210	576	XXX	XXX	XXX	XXX	XXX	Clear No odor
2	98.14	102.48	0.7	3	3/9/2023	172	642	XXX	XXX	XXX	XXX	XXX	Clear No odor
2	98.1	102.48	0.7	3	5/16/2023	180	625	XXX	XXX	XXX	XXX	XXX	Clear No odor
2	98.12	102.48	0.7	3	8/3/2023	200	657	XXX	XXX	XXX	XXX	XXX	Clear No odor
2	98.15	102.48	0.7	3	10/17/2023	108	613	XXX	XXX	XXX	XXX	XXX	Clear No odor

MW	Depth to Water	Total Depth	Well Volume	Volume Purged	Sample Date	Cl	TDS	Benzene	Toluene	Ethyl Benzene	Total Xylenes	Sulfate	Comments
3	99.88	108.83	1.4	5	12/26/2018	292	978	<0.001	<0.001	<0.001	<0.003	298	Clear No odor
3	99.87	108.83	1.4	5	2/25/2019	276	991	<0.001	<0.001	<0.001	<0.003	245	Clear No odor
3	99.88	108.83	1.4	5	5/6/2019	264	936	<0.001	<0.001	<0.001	<0.003	240	Clear No odor
3	99.9	108.83	1.4	5	8/20/2019	252	964	<0.001	<0.001	<0.001	<0.003	227	Clear No odor
3	100.03	108.83	1.4	3	11/6/2019	264	871	<0.001	<0.001	<0.001	<0.003	238	Clear No odor
3	99.99	108.83	1.4	3	2/21/2020	252	1,080	<0.0005	<0.0005	<0.0005	<0.002	242	Clear No odor
3	99.97	108.83	1.4	3	8/28/2020	240	1,080	XXX	XXX	XXX	XXX	219	Clear No odor
3	99.96	108.63	1.4	5	3/2/2021	220	994	XXX	XXX	XXX	XXX	316	Clear No odor
3	99.91	108.63	1.4	5	5/28/2021	228	1,070	XXX	XXX	XXX	XXX	292	Clear No odor
3	99.9	108.63	1.4	5	8/31/2021	340	1,130	XXX	XXX	XXX	XXX	301	Clear No odor

ROC - BD F-29 (1R426-16) & F-29-1 (1R426-15)
Unit Letter F, Section 29, T21S, R37E

MW	Depth to Water	Total Depth	Well Volume	Volume Purged	Sample Date	Cl	TDS	Benzene	Toluene	Ethyl Benzene	Total Xylenes	Sulfate	Comments
3	99.9	108.63	1.4	5	11/1/2021	188	726	XXX	XXX	XXX	XXX	153	Clear No odor
3	99.99	108.63	1.4	5	2/21/2022	308	803	XXX	XXX	XXX	XXX	250	Clear No odor
3	99.94	108.63	1.4	5	5/20/2022	252	868	XXX	XXX	XXX	XXX	XXX	Clear No odor
3	99.96	108.63	1.4	5	8/26/2022	320	983	XXX	XXX	XXX	XXX	XXX	Clear No odor
3	99.97	108.63	1.4	5	11/8/2022	332	1,000	XXX	XXX	XXX	XXX	XXX	Clear No odor
3	99.98	108.83	1.4	3	3/9/2023	252	861	XXX	XXX	XXX	XXX	XXX	Clear No odor
3	99.96	108.83	1.4	3	5/16/2023	224	846	XXX	XXX	XXX	XXX	XXX	Clear No odor
3	99.97	108.83	1.4	3	8/3/2023	160	738	XXX	XXX	XXX	XXX	XXX	Clear No odor
3	99.99	108.83	1.4	3	10/17/2023	84	515	XXX	XXX	XXX	XXX	XXX	Clear No odor

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

March 23, 2023

KATIE JONES

Rice Operating Company

112 W. Taylor

Hobbs, NM 88240

RE: BD JUNCTION F29 & F-29-1

Enclosed are the results of analyses for samples received by the laboratory on 03/14/23 15:35.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-22-15. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

Cardinal Laboratories is accreditated through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Celey D. Keene

Celey D. Keene

Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

Rice Operating Company
KATIE JONES
112 W. Taylor
Hobbs NM, 88240
Fax To: (575) 397-1471

Received:	03/14/2023	Sampling Date:	03/09/2023
Reported:	03/23/2023	Sampling Type:	Water
Project Name:	BD JUNCTION F29 & F-29-1	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	T21S R37E SEC29 F ~ LEA CO, NM		

Sample ID: MONITOR WELL #1 (H231167-01)

Chloride, SM4500Cl-B mg/L **Analyzed By: AC**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride*	**470**	4.00	03/15/2023	ND	104	104	100	3.92	

TDS 160.1 mg/L **Analyzed By: AC**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
TDS*	**1290**	5.00	03/21/2023	ND	806	80.6	1000	0.00	

Sample ID: MONITOR WELL #2 (H231167-02)

Chloride, SM4500Cl-B mg/L **Analyzed By: AC**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride*	**172**	4.00	03/15/2023	ND	104	104	100	3.92	

TDS 160.1 mg/L **Analyzed By: AC**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
TDS*	**642**	5.00	03/21/2023	ND	806	80.6	1000	0.00	

Sample ID: MONITOR WELL #3 (H231167-03)

Chloride, SM4500Cl-B mg/L **Analyzed By: AC**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride*	**252**	4.00	03/15/2023	ND	104	104	100	3.92	

TDS 160.1 mg/L **Analyzed By: AC**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
TDS*	**861**	5.00	03/22/2023	ND	800	80.0	1000	0.377	

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Notes and Definitions

ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C
	Samples reported on an as received basis (wet) unless otherwise noted on report

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

101 East Marland - Hobbs, NM 88240
Tel (575) 393-2326
Fax (575) 393-2476

Cardinal Laboratories, Inc.

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

LAB Order ID # _____

Company Name: RICE Operating Company	BILL TO Company: RICE Operating Company PO#
Project Manager: Katie Jones	Address: (Street, City, Zip) 122 W Taylor Street ~ Hobbs, New Mexico 88240
Address: (Street, City, Zip) 122 W Taylor Street ~ Hobbs, New Mexico 88240	Phone#: (575) 393-9174 Fax#: (575)397-1471
Phone #: (575) 393-9174	Fax #: (575) 397-1471
Project #:	Project Name: BD Junction F29 & F-29-1
Project Location: T21S R37E Sec29 F~ Lea County New Mexico	Sampler Signature: Rozanne Johnson (575)631-9310

H231167

LAB # (LAB USE ONLY)	FIELD CODE	(G)rab or (C)omp	# CONTAINERS	MATRIX: WATER	SOIL	AIR	SLUDGE	PRESERVATIVE METHOD: HCL (2 40ml VOA)	HNO_3	$NaHSO_4$	H_2SO_4	ICE (1-1Liter HDPE)	NONE	SAMPLING: DATE (2023)	TIME
1	Monitor Well #1	G	1	X								1		3/9	14:35
2	Monitor Well #2	G	1	X								1		3/9	9:45
3	Monitor Well #3	G	1	X								1		3/9	11:15

ANALYSIS REQUEST

(Circle or Specify Method No.)

MTBE 8021B/602	BTEX 8021B/602	TPH 418.1/TX1005 / TX1005 Extended (C35)	PAH 8270C	Total Metals Ag As Ba Cd Cr Pb Se Hg 6010B/200.7	TCLP Metals Ag As Ba Cd Cr Pb Se Hg	TCLP Volatiles	TCLP Semi Volatiles	TCLP Pesticides	RCI	GC/MS Vol. 8260B/624	GC/MS Semi. Vol. 8270C/625	PCB's 8082/608	Pesticides 8081A/608	BOD, TSS, pH	Moisture Content	Cations (Ca, Mg, Na, K)	Anions (Cl, SO4, CO3, HCO3)	Sulfates	Total Dissolved Solids	Chlorides	Turn Around Time ~ 24 Hours
																			X	X	
																			X	X	
																			X	X	

Relinquished by: Rozanne Johnson	Date: 3/14/2023	Time: 15:35	Received by: [signature]
Relinquished by:	Date:	Time:	Received By: (Laboratory Staff)

Date: 3-14-23 Time: 1535

Phone Results		Yes		No
Fax Results		Yes		No Additional Fax Number:

REMARKS:

Email Results: kjones@riceswd.com
rozanne@sdacres.com

Delivered By: (Circle One)
Sampler - UPS - Bus - Other:

Sample Condition: Cool: Yes [✓] No [ ] Intact: Yes [✓] No [ ]

CHECKED BY: (Initials) [initials]

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

May 26, 2023

KATIE JONES

Rice Operating Company

112 W. Taylor

Hobbs, NM 88240

RE: BD JUNCTION F29 & F-29-1

Enclosed are the results of analyses for samples received by the laboratory on 05/18/23 16:05.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-22-15. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

Cardinal Laboratories is accreditated through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Celey D. Keene

Celey D. Keene

Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

Rice Operating Company
KATIE JONES
112 W. Taylor
Hobbs NM, 88240
Fax To: (575) 397-1471

Received:	05/18/2023	Sampling Date:	05/16/2023
Reported:	05/26/2023	Sampling Type:	Water
Project Name:	BD JUNCTION F29 & F-29-1	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	T21S R37E SEC29 F ~ LEA CO, NM		

Sample ID: MONITOR WELL #1 (H232539-01)

Chloride, SM4500Cl-B mg/L Analyzed By: AC

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride*	**530**	4.00	05/19/2023	ND	100	100	100	0.00	

TDS 160.1 mg/L Analyzed By: AC

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
TDS*	**1380**	5.00	05/24/2023	ND	809	80.9	1000	1.74	

Sample ID: MONITOR WELL #2 (H232539-02)

Chloride, SM4500Cl-B mg/L Analyzed By: AC

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride*	**180**	4.00	05/19/2023	ND	100	100	100	0.00	

TDS 160.1 mg/L Analyzed By: AC

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
TDS*	**625**	5.00	05/24/2023	ND	809	80.9	1000	1.74	

Sample ID: MONITOR WELL #3 (H232539-03)

Chloride, SM4500Cl-B mg/L Analyzed By: AC

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride*	**224**	4.00	05/19/2023	ND	100	100	100	0.00	

TDS 160.1 mg/L Analyzed By: AC

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
TDS*	**846**	5.00	05/24/2023	ND	809	80.9	1000	1.74	

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Notes and Definitions

QM-07	The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C
	Samples reported on an as received basis (wet) unless otherwise noted on report

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

101 East Marland - Hobbs, NM 88240
Tel (575) 393-2326
Fax (575) 393-2476

Cardinal Laboratories, Inc.

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

LAB Order ID # _____

Company Name: RICE Operating Company	BILL TO Company: RICE Operating Company PO#
Project Manager: Katie Jones	Address: (Street, City, Zip) 122 W Taylor Street ~ Hobbs, New Mexico 88240
Address: (Street, City, Zip) 122 W Taylor Street ~ Hobbs, New Mexico 88240	Phone#: (575) 393-9174 Fax#: (575)397-1471
Phone #: (575) 393-9174	Fax #: (575) 397-1471
Project #:	Project Name: BD Junction F29 & F-29-1
Project Location: T21S R37E Sec29 F~ Lea County New Mexico	Sampler Signature: Rozanne Johnson (575)631-9310

H232539

LAB # (LAB USE ONLY)	FIELD CODE	(G)rab or (C)omp	# CONTAINERS	MATRIX: WATER	SOIL	AIR	SLUDGE	PRESERVATIVE METHOD: HCL (2 40ml VOA)	HNO_3	$NaHSO_4$	H_2SO_4	ICE (1-1Liter HDPE)	NONE	SAMPLING: DATE (2023)	TIME
1	Monitor Well #1	G	1	X								1		5/16	14:05
2	Monitor Well #2	G	1	X								1		5/16	9:05
3	Monitor Well #3	G	1	X								1		5/16	11:00

ANALYSIS REQUEST

(Circle or Specify Method No.)

MTBE 8021B/602	BTEX 8021B/602	TPH 418.1/TX1005 / TX1005 Extended (C35)	PAH 8270C	Total Metals Ag As Ba Cd Cr Pb Se Hg 6010B/200.7	TCLP Metals Ag As Ba Cd Cr Pb Se Hg	TCLP Volatiles	TCLP Semi Volatiles	TCLP Pesticides	RCI	GC/MS Vol. 8260B/624	GC/MS Semi. Vol. 8270C/625	PCB's 8082/608	Pesticides 8081A/608	BOD, TSS, pH	Moisture Content	Cations (Ca, Mg, Na, K)	Anions (Cl, SO4, CO3, HCO3)	Sulfates	Total Dissolved Solids	Chlorides	Turn Around Time ~ 24 Hours
																			X	X	
																			X	X	
																			X	X	

Relinquished by: Rozanne Johnson	Date: 5/18/2023	Time: 16:05	Received by: Tamara Oldaker	Date: 5-18-23 Time: 1605
Relinquished by:	Date:	Time:	Received By: (Laboratory Staff)	Date: Time:

Phone Results		Yes		No
Fax Results		Yes		No Additional Fax Number:

REMARKS:

Email Results: kjones@riceswd.com
rozanne@sdacres.com

Delivered By: (Circle One)

Sampler - UPS - Bus - Other:

Sample Condition: Cool: Yes ☑ No ☐ Intact: Yes ☑ No ☐

CHECKED BY: (Initials) TO

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

August 15, 2023

KATIE JONES

Rice Operating Company

112 W. Taylor

Hobbs, NM 88240

RE: BD JUNCTION F29 & F-29-1

Enclosed are the results of analyses for samples received by the laboratory on 08/09/23 13:51.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-22-15. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

Cardinal Laboratories is accreditated through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Celey D. Keene

Celey D. Keene

Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

Rice Operating Company
KATIE JONES
112 W. Taylor
Hobbs NM, 88240
Fax To: (575) 397-1471

Received:	08/09/2023	Sampling Date:	08/03/2023
Reported:	08/15/2023	Sampling Type:	Water
Project Name:	BD JUNCTION F29 & F-29-1	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Shalyn Rodriguez
Project Location:	T21S R37E SEC29 F ~ LEA CO, NM		

Sample ID: MONITOR WELL #1 (H234262-01)

Chloride, SM4500Cl-B mg/L **Analyzed By: AC**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride*	**456**	4.00	08/10/2023	ND	100	100	100	3.92	

TDS 160.1 mg/L **Analyzed By: AC**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
TDS*	**1240**	5.00	08/10/2023	ND	816	81.6	1000	12.4	

Sample ID: MONITOR WELL #2 (H234262-02)

Chloride, SM4500Cl-B mg/L **Analyzed By: AC**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride*	**200**	4.00	08/10/2023	ND	100	100	100	3.92	

TDS 160.1 mg/L **Analyzed By: AC**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
TDS*	**657**	5.00	08/15/2023	ND	816	81.6	1000	12.4	

Sample ID: MONITOR WELL #3 (H234262-03)

Chloride, SM4500Cl-B mg/L **Analyzed By: AC**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride*	**160**	4.00	08/10/2023	ND	100	100	100	3.92	

TDS 160.1 mg/L **Analyzed By: AC**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
TDS*	**738**	5.00	08/15/2023	ND	816	81.6	1000	12.4	

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Notes and Definitions

ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C
	Samples reported on an as received basis (wet) unless otherwise noted on report

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

101 East Marland - Hobbs, NM 88240
Tel (575) 393-2326
Fax (575) 393-2476

Cardinal Laboratories, Inc.

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

LAB Order ID # H234263

Company Name: RICE Operating Company	BILL TO Company: RICE Operating Company PO#
Project Manager: Katie Jones	Address: (Street, City, Zip) 122 W Taylor Street ~ Hobbs, New Mexico 88240
Address: (Street, City, Zip) 122 W Taylor Street ~ Hobbs, New Mexico 88240	Phone#: (575) 393-9174 Fax#: (575)397-1471
Phone #: (575) 393-9174	Fax #: (575) 397-1471
Project #:	Project Name: BD Junction F29 & F-29-1
Project Location: T21S R37E Sec29 F~ Lea County New Mexico	Sampler Signature: Rozanne Johnson (575)631-9310

ANALYSIS REQUEST

(Circle or Specify Method No.)

LAB # (LAB USE ONLY)	FIELD CODE	(G)rab or (C)omp	# CONTAINERS	MATRIX: WATER	SOIL	AIR	SLUDGE	PRESERVATIVE METHOD: HCL (2 40ml VOA)	HNO_3	$NaHSO_4$	H_2SO_4	ICE (1-1Liter HDPE)	NONE	SAMPLING: DATE (2023)	TIME	MTBE 8021B/602	BTEX 8021B/602	TPH 418.1/TX1005 / TX1005 Extended (C35)	PAH 8270C	Total Metals Ag As Ba Cd Cr Pb Se Hg 6010B/200.7	TCLP Metals Ag As Ba Cd Cr Pb Se Hg	TCLP Volatiles	TCLP Semi Volatiles	TCLP Pesticides	RCI	GC/MS Vol. 8260B/624	GC/MS Semi. Vol. 8270C/625	PCB's 8082/608	Pesticides 8081A/608	BOD, TSS, pH	Moisture Content	Cations (Ca, Mg, Na, K)	Anions (Cl, SO4, CO3, HCO3)	Sulfates	Total Dissolved Solids	Chlorides	Turn Around Time ~ 24 Hours
1	Monitor Well #1	G	1	X								1		8/3	14:00																				X	X	
2	Monitor Well #2	G	1	X								1		8/3	10:15																				X	X	
3	Monitor Well #3	G	1	X								1		8/3	11:45																				X	X	

Relinquished by: Rozanne Johnson	Date: 8/9/23	Time: 1351	Received by: SRodriguez
Relinquished by:	Date:	Time:	Received By: (Laboratory Staff)

Date: 8/9/23 Time: 1351

Date: Time:

Phone Results		Yes		No
Fax Results		Yes		No Additional Fax Number:

REMARKS:

Email Results: kjones@riceswd.com
rozanne@sdacres.com

Delivered By: (Circle One)
Sampler - UPS - Bus - Other:

Sample Condition: Cool: Yes / No; Intact: Yes / No

CHECKED BY: (Initials) SR

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

October 30, 2023

KATIE JONES

Rice Operating Company

112 W. Taylor

Hobbs, NM 88240

RE: BD JUNCTION F-29 & F-29-1

Enclosed are the results of analyses for samples received by the laboratory on 10/19/23 16:20.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-22-15. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

Cardinal Laboratories is accreditated through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Celey D. Keene

Celey D. Keene

Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

Rice Operating Company
KATIE JONES
112 W. Taylor
Hobbs NM, 88240
Fax To: (575) 397-1471

Received:	10/19/2023	Sampling Date:	10/17/2023
Reported:	10/30/2023	Sampling Type:	Water
Project Name:	BD JUNCTION F-29 & F-29-1	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	T21S R37E SEC 29 F ~ LEA COUNTY, NM		

Sample ID: MONITOR WELL #1 (H235742-01)

Chloride, SM4500Cl-B mg/L **Analyzed By: AC**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride*	**480**	4.00	10/20/2023	ND	100	100	100	0.00	

TDS 160.1 mg/L **Analyzed By: AC**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
TDS*	**1350**	5.00	10/27/2023	ND	824	82.4	1000	1.30	

Sample ID: MONITOR WELL #2 (H235742-02)

Chloride, SM4500Cl-B mg/L **Analyzed By: AC**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride*	**108**	4.00	10/20/2023	ND	100	100	100	0.00	

TDS 160.1 mg/L **Analyzed By: AC**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
TDS*	**613**	5.00	10/27/2023	ND	824	82.4	1000	1.30	

Sample ID: MONITOR WELL #3 (H235742-03)

Chloride, SM4500Cl-B mg/L **Analyzed By: AC**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride*	**84.0**	4.00	10/20/2023	ND	100	100	100	0.00	

TDS 160.1 mg/L **Analyzed By: AC**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
TDS*	**515**	5.00	10/27/2023	ND	824	82.4	1000	1.30	

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Notes and Definitions

ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C
	Samples reported on an as received basis (wet) unless otherwise noted on report

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

101 East Marland - Hobbs, NM 88240
Tel (575) 393-2326
Fax (575) 393-2476

Cardinal Laboratories, Inc.

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

LAB Order ID # _____

Company Name: RICE Operating Company	BILL TO Company: RICE Operating Company PO#
Project Manager: Katie Jones	Address: (Street, City, Zip) 122 W Taylor Street ~ Hobbs, New Mexico 88240
Address: (Street, City, Zip) 122 W Taylor Street ~ Hobbs, New Mexico 88240	Phone#: (575) 393-9174 Fax#: (575)397-1471
Phone #: (575) 393-9174	Fax #: (575) 397-1471
Project #:	Project Name: BD Junction F29 & F-29-1
Project Location: T21S R37E Sec29 F~ Lea County New Mexico	Sampler Signature: Rozanne Johnson (575)631-9310

H235742

LAB # (LAB USE ONLY)	FIELD CODE	(G)rab or (C)omp	# CONTAINERS	MATRIX: WATER	SOIL	AIR	SLUDGE	PRESERVATIVE METHOD: HCL (2 40ml VOA)	HNO_3	$NaHSO_4$	H_2SO_4	ICE (1-1Liter HDPE)	NONE	SAMPLING: DATE (2023)	TIME
1	Monitor Well #1	G	1	X								1		10/17	13:40
2	Monitor Well #2	G	1	X								1		10/17	9:45
3	Monitor Well #3	G	1	X								1		10/17	11:05

ANALYSIS REQUEST

(Circle or Specify Method No.)

MTBE 8021B/602	BTEX 8021B/602	TPH 418.1/TX1005 / TX1005 Extended (C35)	PAH 8270C	Total Metals Ag As Ba Cd Cr Pb Se Hg 6010B/200.7	TCLP Metals Ag As Ba Cd Cr Pb Se Hg	TCLP Volatiles	TCLP Semi Volatiles	TCLP Pesticides	RCI	GC/MS Vol. 8260B/624	GC/MS Semi. Vol. 8270C/625	PCB's 8082/608	Pesticides 8081A/608	BOD, TSS, pH	Moisture Content	Cations (Ca, Mg, Na, K)	Anions (Cl, SO4, CO3, HCO3)	Sulfates	Total Dissolved Solids	Chlorides	Turn Around Time ~ 24 Hours
																			X	X	
																			X	X	
																			X	X	

Relinquished by: Rozanne Johnson	Date: 10/19/2023	Time:	Received by:	Date:	Time: 1620
Relinquished by:	Date:	Time:	Received By: (Laboratory Staff)	Date: 10-19-23	Time:

Phone Results		Yes		No	
Fax Results		Yes		No	Additional Fax Number:

REMARKS:

Email Results: kjones@riceswd.com
rozanne@sdacres.com

Delivered By: (Circle One)	Sample Condition				CHECKED BY:
		Cool		Intact	
Sampler - UPS - Bus - Other:	Yes	✓	Yes	✓	(Initials) TO
	No		No		

Sante Fe Main Office
Phone: (505) 476-3441

General Information
Phone: (505) 629-6116

Online Phone Directory
https://www.emnrd.nm.gov/ocd/contact-us

State of New Mexico
Energy, Minerals and Natural Resources
Oil Conservation Division
1220 S. St Francis Dr.
Santa Fe, NM 87505

COMMENTS

Operator: RICE OPERATING COMPANY PO Box 5630 Hobbs, NM 88241	OGRID: 19174
	Action Number: 327831
	Action Type: [UF-GWA] Ground Water Abatement (GROUND WATER ABATEMENT)

COMMENTS

Created By	Comment	Comment Date
csmith	Returned to OCD Review, Reviewer requested to adjust COA.	7/2/2025

Sante Fe Main Office
Phone: (505) 476-3441

General Information
Phone: (505) 629-6116

Online Phone Directory
https://www.emnrd.nm.gov/ocd/contact-us

State of New Mexico
Energy, Minerals and Natural Resources
Oil Conservation Division
1220 S. St Francis Dr.
Santa Fe, NM 87505

CONDITIONS

Action 327831

CONDITIONS

Operator: RICE OPERATING COMPANY PO Box 5630 Hobbs, NM 88241	OGRID: 19174
	Action Number: 327831
	Action Type: [UF-GWA] Ground Water Abatement (GROUND WATER ABATEMENT)

CONDITIONS

Created By	Condition	Condition Date
jburdine	Review of the 2024 Annual Groundwater Report for ROC BD F-29 and F-29-1: approved 1. Continue to groundwater sample quarterly. 2. Submit the 2025 Annual Groundwater Report by April 1, 2026.	7/2/2025